

A. INTRODUCTION

Contaminated materials are potentially harmful substances that may be present in soil, groundwater, or building materials and may pose a threat to human health or the environment. These materials are frequently encountered during construction activities in industrial areas that have been subject to past disturbance from construction, excavation, filling and industrial uses. Generally, “contaminated material” is used interchangeably with “regulated material” or “hazardous material,” but none should be confused with the term “hazardous waste,” which is a regulatory term.¹ This chapter assesses the potential for the presence of these materials on the project site, the potential for exposure to them during and after construction of the project, and the specific measures that would be employed to protect public health, worker safety, and the environment.

For each site that would be affected by the project, the analysis begins by considering the location, type, and extent of contaminated materials that may be present in the soil or groundwater because of past or present uses either on or adjacent to the site. As described below, this assessment was conducted through a review of regulatory records and databases and consultation with regulatory agencies. This evaluation focuses on construction activities since the construction work for the project would disturb the soil and, in some locations, the groundwater. Finally, the chapter describes mitigation measures related to contaminated materials and discusses how those measures would avoid potential impacts both during construction and once the project is completed and operational.

POTENTIAL CONTAMINANTS OF CONCERN

Soil and groundwater beneath a site can become contaminated because of past or present uses on the site or adjacent properties. Most of the sites affected by the project are currently or were historically in railroad or industrial use. Normal rail operations—including maintenance and routine operations—can over time lead to contamination from spills. Along rail lines, common contaminants include volatile and semi-volatile organic compounds, heavy metals, pesticides, and herbicides. The project area may also have been contaminated by past or current uses of neighboring properties, particularly since many of the affected sites are located in largely industrial and manufacturing areas. In addition, much of the rail right-of-way (and much of the development in the area) was built on fill material (of unknown origin), which often contains contaminants such as polycyclic aromatic hydrocarbons (PAHs) and heavy metals. Some of the

¹ “Hazardous waste” is defined in the Environmental Protection Agency (USEPA) regulations (40 C.F.R. Part 261) and refers to a subset of solid wastes that are either specific wastes listed in the regulations (listed wastes) or solid wastes possessing the characteristics of ignitability, reactivity, corrosivity, or toxicity (characteristic wastes).

potential common contaminants of concern for the project site and adjacent uses are discussed below.

- *Polychlorinated Biphenyls (PCBs)*. Commonly used as a dielectric fluid in train-mounted or yard transformers, PCBs are of special concern at rail yards and train maintenance locations.
- *Heavy metals, including lead, cadmium, chromium, and mercury*. These have been widely used in many industries, including printers, foundries, and metal working facilities, and are found in paint, ink, petroleum products, and coal ash. Lead is also a common component of paint on bridges or other steel structures, and can be found in elevated concentrations in soil near roadways as a result of the historic use of leaded gasoline.
- *Volatile Organic Compounds (VOCs)*. These include aromatic compounds (such as benzene, toluene, ethyl benzene, and xylene [BTEX]), which are found in petroleum products used in fuels, equipment repair and metal works, as well as many other industries; and chlorinated compounds (such as trichloroethene and tetrachloroethene, common ingredients in solvents and cleansers) used in degreasing, dry cleaners, and other industrial facilities. Soil and groundwater can become contaminated with VOCs and vapors can be released, especially during excavation activities. In addition, some VOCs, such as methane, can be flammable if the vapors are confined. Methane is produced from the breakdown of organic materials and can be associated with marsh deposits as well as landfilling with putrescible wastes.
- *Semivolatile Organic Compounds (SVOCs)*. These include PAHs (which are common constituents of partially combusted coal or petroleum-derived products); coal-derived products such as creosote applied to protect rail ties; and coal and coal ash used as fill material.
- *Pesticides and Herbicides*. These are commonly used to control rodents and/or insects, and vegetation in rail yards and along rail lines, particularly between the tracks.
- *Fuel Oil and Gasoline Storage Tanks*. Rail operations, businesses, and industries currently or formerly located in the project areas likely contained aboveground storage tanks (ASTs) or underground storage tanks (USTs) for fuels. Some of these tanks may have been removed. In some locations, spills and leaks associated with such tanks may have occurred. Other tanks, although no longer in use, may remain buried in place in the project areas. Soils and groundwater in proximity to fuel oil and gasoline storage tanks may be contaminated because of ongoing or past leaks or spills. Fuel oil and gasoline from off-site sources may have migrated to the project sites, contaminating soil and groundwater on-site.
- *Asbestos*. Potentially asbestos-containing materials may be located within buildings or on underground steam pipes, or at (illegal) dumping sites.

B. REGULATORY CONTEXT AND METHODOLOGY

APPLICABLE REGULATIONS

There are numerous regulations regarding contaminated and contaminated materials at the federal and state levels. The applicable industry standards, regulatory requirements, guidelines and rules for contaminated materials investigations are listed in Table 5.7-1, followed by a summary of key regulations.

Table 5.7-1
Federal and State Regulations for Contaminated Materials

Regulation Type	Regulation
Federal	U.S. Environmental Protection Agency (USEPA) – National Environmental Policy Act (NEPA), 42 U.S.C. s/s 4321 (1969)
	USEPA – Clean Water Act (CWA), 33 U.S.C. s/s 1251 <i>et seq.</i> (1977)
	USEPA – Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. s/s 9601 <i>et seq.</i> (1980)
	USEPA – Resource Conservation and Recovery Act (RCRA), 42 U.S.C. s/s 321 <i>et seq.</i> (1976)
	USEPA – Safe Drinking Water Act (SDWA), 42 U.S.C. s/s 300f <i>et seq.</i> (1974)
	USEPA – National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 C.F.R. Part 61
	USEPA – 40 C.F.R. Parts 260, 261, 262, 263, 266, 268, and 280
	USEPA – Asbestos Hazardous Emergency Response Act (AHERA), 40 C.F.R. Part 763
	USEPA – Lead: Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities; Final Rule, 40 C.F.R. Part 745
	Occupational Safety and Health Administration (OSHA) – 29 C.F.R. 1910.120, 1910.1001, 1910.1101, 1926.62, and 1929.58
	U.S. Department of Housing and Urban Development (HUD) – Guideline for the Evaluation and Control of Lead Based Paint Hazards in Housing pursuant to Title X of the Housing and Community Development Act of 1992
	Toxic Substances Control Act (TSCA), 15 U.S.C. s/s 2601 <i>et seq.</i> (1976)
	OSHA – Lead: Occupational Health and Environmental Controls, 29 C.F.R. 1926.62
	OSHA – Asbestos, 29 C.F.R. 1926.1101
	Federal Highway Administration (FHWA) – Technical Advisory, T6640.8A (1987)
	FHWA – Supplementary Hazardous Waste Guidance (1997)
	FHWA – Hazardous Wastes in Highway Rights-of-Way (1994)
	FHWA – Interim Guidance, Hazardous Waste Sites Affecting Highway Project Development (1988)
FHWA – Policy Revision to Support the Brownfield Economic Redevelopment Initiative (1998)	
State of New Jersey	Spill Compensation and Control Act N.J.S.A. 58:10-23.11
	New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (TRSR), N.J.A.C. 7:26E.
	NJDEP Soil Cleanup Criteria
	NJDEP Department Oversight of the Remediation of Contaminated Sites, N.J.A.C. 7:26C
	NJDEP Solid Waste Regulations, N.J.A.C. 7:26
	NJDEP Pollutant Discharge Elimination System, N.J.A.C. 7:14A
	NJDEP Hazardous Waste Regulations, N.J.A.C. 7:26G
	NJDEP Industrial Site Act Recovery Rules, N.J.A.C. 7:26B
	NJDEP Discharge of Petroleum and Other Hazardous Substances, N.J.A.C. 7:1E
	NJDEP Underground Storage Tanks, N.J.A.C. 7:14B
NJDEP Surface Water Quality Standards, N.J.A.C. 7:9B	
NJDEP Ground Water Quality Standards, N.J.A.C. 7:9-6	
American Society for Testing and Materials Guidelines	ASTM E1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

NEW JERSEY REMEDIATION GUIDANCE, POLICY, AND REGULATIONS

Soil and Groundwater Standards

The Brownfield Act codified at N.J.S.A. 58:10B-12 provides that the NJDEP “shall adopt minimum remediation standards for soil, groundwater and surface water quality necessary for

the remediation of contamination of real property.” In addition, the Act also provides that these standards “shall be developed to ensure that the potential for harm to public health and safety and to the environment is minimized to acceptable levels, taking into consideration the location, the surroundings, the intended use of the property, the potential exposure to the discharge and the surrounding ambient conditions, whether naturally occurring or man-made.” Based upon the Act, the NJDEP has developed three sets of soil remediation standards—residential, nonresidential, and impact to groundwater—based on the projected use of the site. Residential soil remediation standards are set at levels that are based upon the use of the site for residential or similar uses without the need for engineering or institutional controls. Nonresidential soil remediation standards are set at levels of contaminants that recognize the lower likelihood of exposure to contamination on property that will not be used for residential or similar uses. The NJDEP may also approve a remedial action where soils contain contaminants above the remediation standards provided that the property owner agrees to impose restrictions on the use of the property (for example, through the use of institutional controls) and install engineering controls to restrict contact with the residual contamination.

The NJDEP Groundwater Quality Standards (GWQS) specify levels of constituents that, when exceeded, will substantially impair a designated use of water. These standards include a provision for the NJDEP to designate areas of exception to the application of the GWQS in specific situations. The specific area where the GWQS are not met is designated as a Classification Exception Area (CEA). These areas are established to provide notice that the constituent groundwater standards are not met and that the designated aquifer uses are suspended.

Industrial Site Recovery Act (ISRA)

NJDEP’s ISRA requires owners or operators of an industrial establishment to notify NJDEP when they are planning to close or transfer the property to a new owner or operator. A “No Further Action” (NFA) letter is required from NJDEP prior to the transaction. If an NFA cannot be issued due to outstanding environmental concerns at the site, NJDEP must approve a remedial action work plan or a remediation agreement.

Revised Chromium Policy

On February 8, 2007, NJDEP lifted a previously-enacted moratorium regarding NFAs for sites or portions of sites contaminated with chromium. The modified policy specifies the criteria that must be met in order to obtain an unconditional NFA for soils, an unconditional NFA for groundwater, a conditional NFA for soils and/or groundwater for a site that will include day care, residential, or educational uses, and a conditional NFA for soils and/or groundwater for a site that will include commercial, industrial, or open space uses.¹

ASTM PHASE I/II INVESTIGATIONS

The initial environmental assessment of a property, referred to as a Phase I Environmental Site Assessment (ESA) includes a records search within radii specified in ASTM² E1527-05; a review of available documents with the federal, state and local regulatory agencies; review and interpretation of historical data which may reveal evidence of historical activities and their

¹ <http://www.state.nj.us/dep/dsr/chromium/crmorlift200702.pdf>, accessed May 24, 2007.

² American Society of Testing and Materials Standards

potential to impact the environment; a site inspection; and interviews with the current and past operators at the parcel. Normally, the focus of the investigation is to determine past and current uses of a site as related to contaminated materials usage and potential for subsurface contamination. The intent of the Phase I ESA is to also identify and evaluate Recognized Environmental Conditions (REC) associated with a property to allow the user to qualify for the innocent landowner defense under CERCLA.

In addition to the requirements of a Phase I ESA, the NJDEP requires completion of a Preliminary Assessment, the minimum requirement for a site that will undergo a NJDEP review. The Preliminary Assessment serves as the basis for completing an environmental investigation of a site as a means towards obtaining a NFA approval from the NJDEP as well as a means toward meeting the minimum requirements of the due diligence requirements of the innocent purchaser defense as defined by the Spill Compensation and Control Act. The findings of a Phase I ESA or Preliminary Assessment include information available from a review of existing conditions and identify specific areas of concern where additional (Phase II) investigations are warranted to characterize areas and media that are potentially impacted.

Phase II site investigations are field investigations intended to obtain site-specific analytical data at the areas of concern identified during the Phase I investigation, characterize the conditions at the site, and potentially delineate the extent of the contamination. The investigations include collection and laboratory analysis of soil and groundwater samples. The results are compared to the relevant NJDEP cleanup criteria to determine the extent of contamination. The findings of a Phase II investigation assess the need for additional investigations on parcels where right-of-way acquisition or construction activities are anticipated, and aid in developing contaminated soil and groundwater management options during a project's implementation and operation.

SUPERFUND

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," is the law enacted in 1980 which provides the federal government with the authority to respond directly to releases of contaminated substances that may endanger public health or the environment. Superfund sites—areas which may pose such threat—are placed on the National Priorities List (NPL).

USEPA can be notified of situations by individuals that handled the contaminated materials; state, tribal or local governments; reviews of federal and state records; formal citizen petitions; or informal community observation. Upon notification of a potentially contaminated site, the USEPA or trained representatives of the local government conduct a Preliminary Assessment to determine whether a site poses little or no threat to human health and the environment, or if further investigation is warranted. Typically, if further investigation is warranted, a Site Inspection (SI) is conducted. Information from the SI is used to create a Hazard Ranking System (HRS) score, which determines eligibility for the NPL.

According to the USEPA website (http://www.epa.gov/superfund/sites/npl/npl_hrs.htm), inclusion of a site on the NPL guides the USEPA in:

- Determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with a site;
- Identifying what CERCLA-financed remedial actions may be appropriate;
- Notifying the public of sites USEPA believes warrant further investigation; and

- Serving notice to potentially responsible parties that USEPA may initiate CERCLA-financed remedial action.

Appropriate remedial actions are identified during the Feasibility Study (FS) and Remedial Design (RD) phases, and implemented in the Remedial Action (RA) phase. The property owner, previous property owner or party otherwise responsible for the contaminated site is liable for the funding of these actions. In such circumstances the responsible party does not or is unable to pay, the costs are covered by the Superfund and the Oil Liability Trust Fund established by Congress.

METHODOLOGY

The primary study area for the contaminated materials assessment includes those areas where construction activities would occur as part of one or more of the build alternatives. The secondary study area for this analysis is the area roughly between Swift Interlocking to the west and Secaucus Transfer Station to the east, 2,000 feet north and 2,000 feet south of the Northeast Corridor.

PRELIMINARY SITE SCREENING METHODOLOGY

The contaminated materials assessment began with identifying all potential sites of concern within the secondary study area. Federal and state databases and regulatory records were reviewed—including listings of spills, petroleum storage facilities, and state and federally listed contaminated materials sites—to determine the regulatory status of each site. The search of federal and state environmental agency records was conducted in general accordance with ASTM E1527-05 for the secondary study area. A report summarizing the environmental database search was prepared by Environmental Data Resources, Inc. (EDR) of Milford, Connecticut. A copy of the report is attached as Appendix D. Table 5.7-2 shows the federal and state databases that were searched as part of the preliminary site screening methodology. Some of the properties within the primary and secondary study areas have undergone extensive environmental investigations and, where feasible, publicly-available environmental studies were reviewed as part of this analysis.

SECONDARY SCREENING METHODOLOGY

Based on the results of the preliminary site screening, those sites warranting additional investigation were identified. Sites were categorized either as: (1) potentially requires further investigation; or (2) further investigation not required. Sites not requiring further investigation were determined unlikely to affect the project site, either because of geographic reasons (e.g., sites were located 2,000 feet from the Northeast Corridor, but were across the Passaic River and therefore highly unlikely to be disturbed) or due to completion of prior remediation activities. Sites determined not to require further investigation included locations of small spills of contaminated materials or petroleum (less than 50 gallons); spills and tanks associated with residential-use storage tanks of 2,000 gallons or less; closed status spills indicating satisfactory completion of prior remediation activities, surface water and air releases; and registered contaminated waste generators, transporters, and treatment, storage, and disposal (TSD) facilities where there were no reported incidents of spills or discharge of contaminated substances.

**Table 5.7-2
Databases Searched**

Database Searched	Description
Federal ASTM Standard Databases	
National Priority List (NPL)	Identifies site for priority cleanup under the Superfund Program.
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	Data on potentially hazardous waste sites that have been reported to the USEPA pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
CERCLIS No Further Remedial Action Planned (CERC-NFRAP) List	CERCLIS sites that have been removed from CERCLIS.
Corrective Action Report (CORRACTS) List	Identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity.
Resource Conservation and Recovery Information System (RCRIS) List	Includes information on sites which generate, transport, treat and/or dispose of hazardous waste as defined by RCRA.
Emergency Response Notification System (ERNS) List	Data on reported releases of oil and hazardous substances.
State ASTM Standard Databases	
Known Contaminated Sites Administered by NJDEP (State Hazardous Waste Site [SHWS])	Sites in New Jersey under the purview of the Site Remediation Program which have contamination levels greater than applicable cleanup criteria soil and/or groundwater standards.
Solid Waste Facility Directory (SWF/LF)	Inventory of solid waste disposal facilities or landfills.
Leaking UST (LUST) List (NJDEP)	Inventory of reported leaking underground storage tank incidents.
Underground Storage Tank (UST) List (NJDEP)	Inventory of USTs regulated under Subtitle I of RCRA.
Federal ASTM Supplemental Databases	
CERCLA Consent Decrees (CONSENT)	Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites.
Records of Decision (ROD)	ROD documents mandate a permanent remedy at an NPL (Superfund) site.
De-Listed NPL	Sites deleted from the NPL in accordance with 40 C.F.R. 300.425(e).
Facility Index System (FINDS)	Includes facility information and "pointers" to other sources that contain more detail.
Hazardous Materials Information Reporting System (HMIRS)	Includes hazardous material spill incidents reported to the Department of Transportation.
Material Licensing Tracking System (MLTS)	Database of sites which possess or use radioactive materials and which are subject to Nuclear Regulatory Commission requirements.
Mines Master Index File (MINES)	Inventory of mines active or opened since 1971.
NPL Liens	Inventory of sites where the USEPA has filed liens against real property in order to recover remedial action expenditures.
PCB Activity Database System (PADS)	Inventory of generators, transporters, commercial storers and/or brokers and disposers of PCB's.

**Table 5.7-2 (cont'd)
Databases Searched**

Information/Data Required	Description
Federal ASTM Supplemental Databases	
Department of Defense (DOD)	Sites Inventory of federally owned or administered lands, administered by the DOD, that have any area equal to or greater than 640 acres.
US Brownfields	Listing of brownfields properties addressed by Cooperative Agreement Recipients and brownfields addressed by Targeted Brownfields Assessments.
RCRA Administrative Action Tracking System (RAATS)	Includes data on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the USEPA.
Toxic Chemical Release Inventory System (TRIS)	Inventory of facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.
Toxic Substances Control Act (TSCA)	Manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list.
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System (FTTS)	Data on administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act).
State or Local ASTM Supplemental Databases	
New Jersey Major Facilities	Facilities having total combined storage capacity of 20,000 gallons or more for hazardous substances other than petroleum or petroleum products, or 200,000 gallons or more of hazardous substances of all kinds.
New Jersey Spills	Initial notification information of hazardous material incidents.
New Jersey Release Database	Initial notification information reported to the NJDEP's Environmental Action Line.
Publicly-Funded Cleanups Site Status Report (NJDEP)	Includes information on publicly funded cleanups.
Chromate Chemical Production Waste Sites (NJDEP)	Inventory of known chromate chemical production waste sites.
New Jersey Pollutant Discharge Elimination System Dischargers (NJPDES)	Inventory of permitted NJPDES dischargers.
Former Manufactured Gas (Coal Gas) Sites	Inventory of former Manufactured Gas (Coal Gas) Sites.
Brownfields (NJDEP)	Former or current commercial or industrial use sites that are presently vacant or underutilized, on which there is suspected contamination to the soil or groundwater at concentrations greater than applicable cleanup criteria.
Sites with Closed Case(s) with Restrictions (NJDEP)	Sites with engineering and/or institutional controls that remain in place as part of a remedial action to address soil and/or groundwater contamination.

Sites potentially requiring further investigation, depending on the extent of disturbance associated with construction of the proposed project, may need additional research. This may entail consultation with NJDEP and/or other regulatory authorities to evaluate the disturbance’s potential to affect the project site. Site-specific protocols may also need to be prepared either for soil/groundwater testing or for appropriate safety or waste management procedures. The assessment did not consider groundwater flow direction and proximity to the project site. This analysis is therefore conservative since potential contamination in any direction is considered. Sites located upgradient (with respect to groundwater) of the rail lines have a greater potential to impact the project site because contaminants may travel downgradient in the groundwater. Sites downgradient of the rail lines are less likely to impact the project site. Proximity to the rail line is also an important factor in determining potential for impact. All other factors being equal, the closer a listed site is to the project site, the greater the likelihood for impact.

For those sites where previous environmental investigations were available for review, the levels of various chemical constituents in soil and groundwater have been compared to various regulatory limits and guidelines, as appropriate for non-residential sites. These values generally serve as screening levels—contamination identified at levels below the screening level do not warrant further evaluation, and contamination above the screening level indicates the need for additional information and/or potential mitigation. The criteria used to evaluate contaminants are described in Table 5.7-3. In addition, as described later in this chapter, any material that must be removed from the project for disposal off-site will undergo a separate evaluation of contamination to meet off-site disposal requirements.

**Table 5.7-3
Evaluation Criteria**

Matrix	Action	Regulation
Non-residential soil	Clean Up Criteria	N.J.A.C. 7:26D NRSCC
Residential soil	Clean Up Criteria	N.J.A.C. 7:26D RSCC
Dewatering	Sewer Discharge	Local sewer ordinance
Dewatering	Surface Water Discharge	NJPDES Permit
Notes: NJPDES – New Jersey Pollutant Discharge Elimination System		

C. EXISTING CONDITIONS

The following assessment summarizes conditions at and adjacent to the project site, based on the results of the records research and review of previous investigations of sites in the vicinity. More information is provided in these investigation reports and other studies that are supporting documents to this environmental impact statement (EIS). For the larger secondary study area, which includes primarily commercial and industrial sections of Kearny and Secaucus, a review of federal and state environmental agency databases was conducted. This review identified 292 sites with potential petroleum or contaminated materials contamination. Appendix D provides the complete EDR report (including a map that shows the general locations of each of these 292 sites) and a summary of the potential contamination sources at each of the sites.

The initial screening of these 292 sites was determined using the methodology presented in Section B, above. Of the 292 potentially contaminated sites within the primary study area, 47 were determined to potentially require additional investigation (see Table 5.7-4). These include gasoline service stations and other fuel dispensing facilities, former and current industrial

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facilities, closed sanitary and other solid waste disposal landfills, warehouses, scrap yards, and sites contaminated with chromium, which is a regional issue in Hudson County.

Table 5.7-4
Secondary Screening – Sites Potentially Requiring Further Investigation

Item No.	Map ID	Site Identification	Site Address	Reference	Potential Contaminants
1	1	NJ Turnpike Authority	24 County Avenue Secaucus, NJ	NJDEP UST Facility ID: 259685 LUST	Petroleum products
2	1	None	38 County Avenue Secaucus, NJ	NJDEP NJ Release: Case No: 06-02-08-1602-17	Petroleum products
3	2	Intermodal Facility	501 New County Road Secaucus, NJ	NJDEP NJ Release / VCP Case No: 06-11-17-0833-35	Unknown
4	3	Laurel Hill Redevelopment Area	New County Road/County Road Ext Secaucus, NJ	NJDEP VCP	Petroleum products
5	3	Gallo Asphalt Landfill AKA 1947 Landfill (former)	New County Road/County Road Extension Secaucus, NJ	NJDEP VCP: Case No. 00094813	No additional information reported
6	3	Command Web Offset Company, Inc.	100 Castle Road Secaucus, NJ	NJDEP SHWS: Case No: 165863 VCP: Case No: 02-09-18-1515-26	Petroleum products.
7	4	Vacant Lot	Vacant Lot New County Road Secaucus, NJ	NJDEP SWF/LF: Facility ID: 0909000429	Municipal waste landfill
8	5	Ames Warehouse	1000 New County Road Secaucus, NJ	NJDEP	Arsenic, base neutrals and other metals
9	7	Service Station Specialists	SSS Construction Company 800 New County Road Secaucus, NJ	NJDEP UST: Facility ID: 018680 LUST HIST:	Petroleum products
10	9	999 New County Road	999 New County Road Secaucus, NJ	NJ Release: Case No. 02-09-24-0944-04	Unknown
11	10	1500 New County Road Extension	1500 New County Road Extension Secaucus, NJ	EPA HMIRS	Hazardous material

Table 5.7-4 (cont'd)
Secondary Screening - Sites Potentially Requiring Further Investigation

Item No.	Map ID	Site Identification	Site Address	Reference	Potential Contaminants
12	13	Cylinder Maintenance Corp	590 Belleville Turnpike Kearny, NJ	EPA RCRA-TSDF Facility ID: NJD000632240 CORRACTS:	Unknown
13	14	Chemical Land Holdings, Inc.	Hudson County Chromate #58 996 Belleville Turnpike Kearny, NJ	SHWS: Case No: G000008698	Chromium
14	16	L & J Drum Company	L & J Drum Company 1810 Harrison Avenue Kearny, NJ	CERCLIS-NFRAP EPA ID: NJD991291501	Unknown
15	17	Hudson County Chromate # 48	Hudson County Chromate # 48 1000 Belleville Turnpike Kearny, NJ	NJ Institutional Control CEA Case No: 82293 NJ Engineering Control Site ID: 66604	Chromium
16	17	Standard Chlorine Chemical Company Inc.	Standard Chlorine Chemical Company Inc. 1035 Belleville Turnpike Kearny, NJ	NJDEP: Facility ID: 37720	A large body of information is already available within the ARC DEIS.
17	17	N/A	Cloroben Chemical Corp 1035 Belleville Turnpike Kearny, NJ	ERNS:	Sulfuric acid discharge to a diked area on 03/01/1990
18	17	N/A	Tierra Solutions Inc. 1015 Belleville Turnpike Kearny, NJ	NJPDES: Permit No. NJG120049	Stormwater discharge
19	17	N/A	Sevenson Environmental Corp Chemical Land Holdings Property 1015 Belleville Turnpike Kearny, NJ	FINDS: NJEMS	Additional information would be available within the NJEMS database
20	17	N/A	Chemical Land Holdings Inc 1015 Belleville Turnpike Kearny, NJ	NJ Spills: Case No. 93-02-08-1623-27 NJPDES: Permit No. NJ0120049	A large body of information is already available within the ARC DEIS.
21	17	Former Kearny Drum Dump Jana Corporation (Royale Linens)	Hudson County Chromate # 50 Everest Realty Company 993 Belleville Turnpike Kearny, NJ	CERCLIS-NFRAP Facility ID: 0201124 NJ Institutional Control: Facility ID: 22012 NJ CHROME: Facility ID: 50	Site archived on 03/31/87 Chromium and other unknown contaminants

Table 5.7-4 (cont'd)
Secondary Screening - Sites Potentially Requiring Further Investigation

Item No.	Map ID	Site Identification	Site Address	Reference	Potential Contaminants
22	18	Contract Applications Inc 1148 Newark Turnpike Kearny, NJ 07032	Contract Applications Inc 1148 Newark Turnpike Kearny, NJ 07032	EPA ID: NJD982719536	No violations reported
23	18	N/A Area of Harrison Avenue /I-280 Ramp Kearny Town, NJ	Area of Harrison Avenue /I- 280 Ramp Kearny Town, NJ	NJ Spills: Case No. 99-03-11-1117- 15	Leachate leak from landfill on to the roadway
24	19	N/A Kearny Drum Dump No. 2 Harrison Avenue Between Route 508 and Erie Kearny, NJ 07032	Kearny Drum Dump No. 2 Harrison Avenue Between Route 508 and Erie Kearny, NJ 07032	CERCLIS-NFRAP Site ID: 0200873 FINDS: EPA ID: NJD980770069	Drum dump was assessed and hazardous materials including contaminated soils were removed in 1985.
25	20	GSF	GSF 1501 Harrison Avenue Kearny Town, NJ	NJ Spills: Case No. 00-01-13-1252- 39	Former landfill. Unknown contaminants
26	22	Drew Chemical Corporation	Drew Chemical Corporation 1106 Harrison Avenue Kearny, NJ 07032	SSTS: Registration No. 001757NJ001	Registered pesticides producing/marketing/ex porting facility.
27	22	Standard Tallow Corporation B & L Oil Corporation	Standard Tallow Corporation 1215 Harrison Avenue Kearny, NJ 07029	FTTS: ICIS: Action ID: 02-1992-0021	Pesticides Petroleum products, unknown (Closed recycling center)
28	22	HMDC 1-A SLF	HMDC 1-A SLF 1800 Harrison Avenue Kearny, NJ	HIST LF: Facility ID: 0907000423	Municipal Sanitary Landfill Unknown contaminants
29	22	G & S Motor Equipment Company	G & S Motor Equipment Company 1800 Harrison Avenue Kearny, NJ 07032	EPA CERCLIS-NFRAP NJDEP VCP: Case No. 95-12-14-1751- 32 HWS RE-VAL: PI No. G000002335	Elevated levels of PCBs in soils.
30	22	Central Salvage Company	Central Salvage Company 1221 Harrison Avenue Kearny Town, NJ 07032	NJDEP: SHWS: Case ID: 031684	Active, deed notice addresses elevated cadmium in addition to petroleum products.
31	22	Campbell Foundry Company 1235 Harrison Avenue Kearny, NJ 07032	Campbell Foundry Company 1235 Harrison Avenue Kearny, NJ 07032	EPA ID: NJD002457273 NJDEP SHWS: Case No. 003511	Soil contamination due to gasoline UST.

Table 5.7-4 (cont'd)
Secondary Screening - Sites Potentially Requiring Further Investigation

Item No.	Map ID	Site Identification	Site Address	Reference	Potential Contaminants
32	22	Municipal Sanitary Landfill Authority	Municipal Sanitary Landfill Authority 1500 Harrison Avenue Kearny, NJ	EPA ID: NJD981877673 SHWS: Case ID: G000006013	Non-superfund Landfill. Municipal wastes, waste oils, etc. were deposited. 94-acre site active status located in a wetland area near the Passaic River / Exit 15W of NJ Turnpike. Active. Remedial actions by NJDEP
33	23	Goody Products Incorporated	Goody Products Inc 969 Newark Turnpike, Inc. 969 Newark Turnpike Kearny Town, NJ	NJ Release: SHWS: Case ID: 014955 NJ ISRA: Case No: E93466	Petroleum products
34	24	Diamond Head Oil Refinery	Diamond Head Oil Refinery 1401 Harrison Turnpike Kearny Town, NJ 07032	SHWS: Case ID: G000003964	Petroleum products
35	28	NJ TRANSIT	Meadowlands Maintenance Complex 1148 Newark Turnpike Kearny Town, NJ 07032	SHWS: Case ID: 030517	Active status. Heavy metals.
36	29	Preston Trucking Company, Inc.	Preston Trucking Company, Inc. 50 Harrison Avenue Harrison, NJ	NJDEP LUST HIST: Case ID: 95-05-03-1706-48	Petroleum products
37	31	Cap City Products Company, Inc.	Cap City Products Company, Inc. 125 Sanford Avenue Kearny, NJ 07032	HIST MAJOR Facility: Facility ID: 090700472000	Hazardous chemical storage and utilization.
38	31	Capital City Products Company, Inc. 125 Sanford Avenue Kearny Town, NJ 07032	Capital City Products Company, Inc. 125 Sanford Avenue Kearny Town, NJ 07032	NJ Engineering Controls	Base neutral compounds, metals and PCBs. Engineering controls in place.
39	32	Diamond Head Oil Refinery Division 1401 Harrison Turnpike Kearny, NJ	Diamond Head Oil Refinery Division 1401 Harrison Turnpike Kearny, NJ	CERCLIS NPL Facility ID: 0200484	Facility was in operation from 1946 to 1979. Extensive petroleum product contamination was encountered during the construction of I-280 in 1977

Table 5.7-4 (cont'd)
Secondary Screening - Sites Potentially Requiring Further Investigation

Item No.	Map ID	Site Identification	Site Address	Reference	Potential Contaminants
40	33	Owens Corning Kearny Roofing & Asphalt Plant 1249 Newark Turnpike Kearny, NJ 07032	Owens Corning Kearny Roofing & Asphalt Plant 1249 Newark Turnpike Kearny, NJ 07032	NJ MAJOR FACILITY: Facility No. 090700531000 NJ Spills: Case No. 93-3-22-1531-59 NJ Release: Case No. 02-12-06-1500-16 Case No. 03-06-07-0927-21	Petroleum product spills
41	33	NJ TRANSIT Rail Yard Newark Turnpike Kearny Town, NJ	NJ TRANSIT Rail Yard Newark Turnpike Kearny Town, NJ	NJ Spills: Case No. 94-3-29-1223-43	Related to discharge to storage tank dyke area.
42	35	MSLA 1-D 1500 Harrison Avenue Kearny, NJ	MSLA 1-D 1500 Harrison Avenue Kearny, NJ	HIST LF: Facility ID: 0907000415	Closed municipal sanitary landfill.
43	38	PSE&G Generator Pennsylvania Avenue Kearny Town, NJ	PSE&G Generator Pennsylvania Avenue Kearny Town, NJ	NJ Spills: Case No. 99-08-11-1527-17	Petroleum products, PAHs .
44	41	Monsanto Company	Monsanto Company 1 Pennsylvania Avenue Kearny, NJ	ICIS: Case ID: 02-1990-0063 NJ Institutional Control NJ Engineering Control	Deed notice to address soil contamination CEA to address groundwater contamination
45	41	G.O.D. Inc. Distribution Center	G.O.D. Inc. Distribution Center CSX Intermodal Facility Foot of Pennsylvania Avenue South Kearny, NJ	LUST HIST: Case ID: 98-07-14-1403-14 SHWS: Case ID: 0907	Petroleum product
46	44	Hudson County Chromate #182 70 Pennsylvania Avenue Kearny, NJ	Hudson County Chromate #182 70 Pennsylvania Avenue Kearny, NJ	NJDEP CHROME	Chromium
47	44	S&W Waste Inc. 53 Pennsylvania Avenue South Kearny, NJ	S&W Waste Inc 53 Pennsylvania Avenue South Kearny, NJ	CERCLIS-NFRAP RCRA-TSDF Facility ID: NJD096865837	Unknown

ADDITIONAL INFORMATION ON SELECTED PROXIMATE SITES

The following sites, all in close proximity to the project site and potentially subject to direct disturbance (e.g., excavation) associated with one or more build alternatives, are discussed below in terms of history, known contamination, jurisdiction, remediation plans, etc.

AMTRAK'S RIGHT-OF-WAY

Amtrak owns right-of-way adjacent to the Northeast Corridor as shown in Figure 3-1. Contamination within rail rights-of-way typically comes from a variety sources—leakage of diesel fuel from locomotives, leakage of lubricating or transformer oils from trains, contaminated material leakage from freight cars or contamination from stationary sources within the right-of-way (including the fill materials used to construct/elevate the right-of-way). The Northeast Corridor in the vicinity of the Portal Bridge has been electrified since its construction in 1900, and has not been used by freight traffic, greatly reducing the potential for contamination from railroad operations.

There is also the potential for contamination (including lead-based paint, asbestos-containing materials or PCBs or other oil-containing equipment) associated with ancillary structures to the railroad, such as signal towers, and power generation/transformer facilities. Prior studies performed on behalf of Amtrak recommended that a Phase II ESA be conducted within the railroad corridor to determine the level of contaminants in the soil and groundwater prior to construction activities.

DIAMOND SHAMROCK, STANDARD CHLORINE, KOPPERS COKE AND HACKENSACK RIVER SEDIMENTS

The 27-acre “Diamond Shamrock” property is located immediately west of the Hackensack River bordering the southern boundary of the existing Amtrak railroad embankment. Until 1976, the property was used for the production of leather tanning chemicals (sodium dichromate and potassium dichromate). The majority of the buildings on the property were demolished in 1978. The site is covered with 8 to 10 feet of fill comprised of chromium laden slag and silty sand. The Occidental Chemical Corporation (successor to the Diamond Shamrock Corporation) owns the site and remediation is being overseen by Tierra Solutions under jurisdiction of NJDEP. Investigation and remediation of this property has been and may to some extent continue to be tied to that of the two properties to the south (and thus farther from the proposed project). These other sites are known as “Standard Chlorine” and “Koppers Coke.”

The 25-acre Standard Chlorine site is bound by the Belleville Turnpike (State Route 7), the Koppers Coke, and Diamond Shamrock sites, and the Hackensack River, and was used over the years for manufacturing items such as naphthalene products, creosote disinfectants, mothballs (dichlorobenzene), drain cleaner products, lead acid batteries, raw rubber parts, and dye carriers. NJDEP identified several areas of concern at the site including on-site lagoons, chromium ore processing residues, soil contaminated with dioxins, volatile and semi-volatile organic compounds, and semi-volatile organic compounds, contaminated concrete, groundwater contamination (including dense non-aqueous phase liquid [DNAPL]), contaminated drainage ditch surface water, and migration of contamination to the Hackensack River surface water and sediments. Remediation is expected to include installation of a hydraulic barrier along the Hackensack River and around the perimeter of the two sites to prevent potential migration of DNAPL and impacted groundwater from the two sites to the river. In a rulemaking published in the *Federal Register* on September 19, 2007, the Standard Chlorine site was added to the Superfund program’s National Priorities List (NPL). It is not currently clear to what extent remediation of Standard Chlorine will be coordinated with that of Diamond Shamrock. Remediation will likely include construction of a perimeter hydraulic barrier, a groundwater recovery and treatment system, lagoon cleanup, sediment cleanup, surface cover, and stormwater management.

The 155-acre site Koppers Coke site was a coke plant and coal tar processing facility. Portions of the site are still in active use. Existing contamination includes: dense and light non-aqueous phase liquids (NAPL); impacted soils (primarily VOCs in the former coke and light oil refining areas and PAHs in the former coal tar processing areas); and surface disposal of process and waste materials (coal tar waste, chromium-contaminated fill, and oil deposit areas). A remedial action work plan (RAWP) was submitted to NJDEP in 1997 and approved in 1998. Proposed remedial actions (not yet implemented, but expected to begin in the near future) include placement of a cover of processed dredged material (PDM), a subsurface barrier system along the Hackensack River, and recovery of NAPL.

The sediments in portions of the Hackensack River adjacent to the Diamond Shamrock, Standard Chlorine, and Koppers Coke sites have been impacted by a variety of contaminants. The Peninsula Restoration Group prepared a Hackensack River Study Area Remedial Investigation Work Plan in December 2005 to determine the extent and type of contamination present in these sediments, and to conduct a screening level ecological risk assessment. This Work Plan has not yet been implemented. Removal of river sediments within 50 feet of shore to a depth of three feet adjacent to the Diamond Shamrock and Standard Chlorine sites was proposed as part of the most recent work plans.

JANA CORPORATION AND OTHER POTENTIAL CHROMIUM SITES

The Jana Corporation property is located immediately west of the Hackensack River bordering the northern boundary of the existing Amtrak railroad embankment. The site was formerly part of the Kearny Drum Dump, is listed as a CERCLIS-No Further Remedial Action Planned (NFRAP) site and includes institutional controls. NFRAP sites that were considered for NPL listing but were not ultimately listed due to the large number of heavily contaminated sites that were eligible for listing. It is unclear what, if any, remedial actions occurred on the site. Additionally, this site is one of many Hudson County chromium-contaminated sites. The project area west of the Hackensack River may be contaminated with chromate ore and there are thought to be at least 160 such sites in the vicinity of the Portal Bridge.

LANDFILLS

Several closed landfills are located immediately adjacent to the Amtrak right-of-way, including the 1A Landfill west of the Hackensack River and the Malanka Landfill east of the Hackensack River. These landfills generally operated prior to rigorous environmental regulations and some were closed prior to current stricter requirements. Even at landfills that restricted the placement of contaminated materials, if excavation were to be required in these filled areas, the potential for contamination to be encountered is generally high.

In summary, historically the project area and vicinity were primarily open water or marshland. Although some wetland areas remain and have not apparently been filled, most of the area has been filled, in a controlled or uncontrolled manner, some as sanitary or industrial landfills. Many of the filled areas, some of which apparently used chromate contaminated or other unknown fill, were developed with industrial activities that are known to have caused subsurface contamination and others may be contaminated, but have had little or no investigation. As such, the next sections evaluate potential contaminated material impacts of the project alternatives (including the No Action Alternative) in particular those related to soil disturbance, both from the above 47 sites or from within the right-of-way (such as fill of unknown origin or contamination from railroad usage). Additionally, within the right-of-way, certain build

alternatives would require some disturbance of structures or equipment containing lead-based paint, asbestos containing materials) or PCB-containing oils.

D. NO ACTION ALTERNATIVE

The No Action Alternative would not involve any construction activities as part of the Portal Bridge Capacity Enhancement Project. Section B of Chapter 3, "Project Alternatives," describes several regional transportation projects that are expected to be completed by 2030. In addition, there are several other projects which could be completed by that time that might affect contaminated materials. In the future without the project, remediation of sites already known to regulatory agencies (for example, the Standard Chlorine Superfund NPL site remediation is expected to be completed by 2015) will continue. Cleanup is anticipated to occur by 2016 of at least the roughly 90 acres of the Koppers Coke site which is the location of NJ TRANSIT's planned Kearny Yard. Cleanup in the Hackensack River may be required as a result of the combined sediment impact study that is being performed for the Koppers Coke, Standard Chlorine, and Diamond Shamrock sites.

Remediation of the various chromium contaminated sites within the study area may occur pursuant to the new NJDEP policy.

Remediation of other contaminated sites within the project study area (not currently slated for remediation) may or may not occur by 2030 depending on the final investigations or projects not related to the Portal Bridge Capacity Enhancement Project.

E. PROBABLE IMPACTS OF THE BUILD ALTERNATIVES

Although the final extent of subsurface disturbance associated with the build alternatives has not yet been fully determined, it would occur in areas with varying degrees of contamination. Contaminated materials are known or likely to be present both within the right-of-way as well as in sites adjacent to or proximate to the right-of-way. Construction of the proposed project would involve some demolition, relocation or other disturbance of existing structures and excavation, disturbance, and likely removal for off-site disposal of some existing soil. Dewatering of groundwater would most likely also be required in specific locations, depending on the final determination of the types of foundations to be used for bridges, viaducts, and retaining walls, as well as the ultimate construction methods.

The presence of contaminated materials only presents a threat when exposure to these materials occurs. Even then a health risk requires both a complete exposure pathway to the contaminants and a sufficient dose to produce adverse health effects. The most likely route of exposure would be through breathing volatile/semi-volatile compounds or particulate-laden air released during demolition, excavation, and construction activities. Following construction of the proposed project, there would be no significant potential for continued exposure. In order to prevent such exposure pathways and doses, the proposed project would include appropriate health and safety and investigative/remedial measures (conducted in consultation with the appropriate regulatory authorities). These measures are discussed more fully below, but would include:

- Procedures for pre-construction removal of asbestos and appropriate management of LBP and of PCB-containing equipment.
- Additional subsurface investigation, both to study sites not yet investigated and to better characterize soils to be disturbed by project construction.

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- Development of a Construction Health and Safety Plan (CHASP) that would include detailed procedures for managing both known contamination issues (e.g., soil handling at known contaminated areas) and any unexpectedly encountered contamination issues. The CHASP would also include procedures for avoiding the generation of dust that could affect the surrounding community and the environment as well as the monitoring necessary to ensure that no such impacts are occurring.

EXISTING STRUCTURES

ASBESTOS-CONTAINING MATERIALS (ACM) MANAGEMENT PLAN

Proper handling, removal, and disposal of ACM is governed by both federal and state requirements. Appropriate engineering controls (e.g., wetting and other dust control measures) to minimize asbestos exposure would be implemented prior to and throughout the project.

LEAD-BASED PAINT (LBP) MANAGEMENT PLAN

If lead-coated surfaces are present, an exposure assessment would be performed to determine whether lead exposure would occur during construction of the project including demolition and/or removal of the existing Portal Bridge. If the exposure assessment were to indicate the potential to generate airborne dust or fumes with lead levels exceeding health-based standards, a higher personal protection equipment standard would be employed to counteract the exposure. In all cases, appropriate methods to control dust and air monitoring, as required by OSHA, would be implemented.

PCB-CONTAINING EQUIPMENT

Suspected PCB-containing equipment (e.g., transformers, electrical feeder cables, hydraulic equipment, and fluorescent light ballasts) that would require disturbance or relocation for construction of the proposed project would be surveyed and evaluated. PCB-containing equipment that would be disturbed by the work would be removed and disposed of in accordance with applicable federal and state regulations. Generally, unless suspected PCB-containing equipment is labeled to be “non-PCB,” it must be tested or assumed to be PCB-containing and disposed of at properly licensed facilities.

SUBSURFACE DISTURBANCE

As described earlier, the entire project area has to some degree the potential for the presence of subsurface contaminated materials. The right-of-way itself likely includes fill of unknown origin and in addition to known contaminated sites that are immediately adjacent (e.g., the Diamond Shamrock site), there are many known chromate sites and other known contaminated properties in the vicinity.

All build alternatives would require substantial subsurface disturbance in specific areas such as the locations of bridge piers and abutments, retaining walls, catenary support structures, etc. Due to the presence of compressible soils, deep foundations for the river crossing and the approach spans would be necessary. While the final selection of foundations would occur during preliminary engineering, options include drilled shafts, cast-in-place concrete pipe piles, driven concrete or steel piles or spread footings on mass concrete pedestals. Some of these options, such as the drilled shafts, could require the disposal of soil up to 90 feet or more below the existing ground elevation. Others such as the driven piles do not produce the spoils associated

with drilled shaft construction. In areas where the proposed track would be placed on new or existing embankment, the potential for exposure to contaminated materials is much less. However, deeper excavations would still be required for catenary and signal support structures, communication towers, and possibly new or relocated utilities.

Among the alternatives, the only substantive difference with respect to contaminated materials is that Alternatives FS and DS would require subsurface disturbance and construction within the Diamond Shamrock property. Alternative FE would require the use of a portion of the site for construction staging, but this would not involve any subsurface disturbances and all alternatives may use the site for staging given its waterfront access. The construction of Alternatives FS and DS would consist of embankment as well as the approach span for the river crossing and would include subsurface disturbance. Therefore, these alternatives have a greater potential to disturb contaminate materials than the alternatives that use the existing Portal Bridge alignment for the southern bridge. As discussed below, Alternatives DS, FS, and FE (and potentially DE) would also require greater coordination with NJDEP with respect to the ongoing investigations and remediation of the Diamond Shamrock property. All four build alternatives have the potential to require some disturbance to the existing IA and Malanka Landfills. As the project proceeds, Amtrak and NJ TRANSIT will continue to coordinate with the property owners and the regulatory agencies to minimize disturbance to these landfills.

Detailed procedures would be incorporated into the project's construction documents to govern excavation and other activities that would entail subsurface disturbance. For the various types of materials (e.g., chromate-contaminated soils, historic fill, putrescible wastes, native materials), the types of commitments that would be included in the specifications (both to meet all applicable legal requirements and to minimize potential impacts) are described below. Preventive measures would be undertaken to protect the safety of the public, construction workers, as well as the broader environment. These measures would include subsurface investigations at properties that have not yet been sufficiently investigated. All work would be performed in accordance with applicable local, state, and federal requirements.

AGENCY CONSULTATION AND ADDITIONAL INVESTIGATION

To the extent that many of the sites bordering the right-of-way are known to NJDEP and have had some degree of investigation, once limits of disturbance for the chosen alternative are determined, NJDEP (and as appropriate USEPA, NJMC, property owners, and potentially other responsible or affected parties) would be consulted to determine:

- all available environmental information on the portions of the site which would be disturbed by the chosen alternative;
- scope and schedule for any additional planned testing or remediation;
- required health and safety procedures for testing or excavation work in those portions of the site;
- the extent, if any, to which the chosen alternative's proposed disturbance would conflict with or require modification of the proposed remediation of the remainder of the site.

For example, at some of the suspected chromate sites it is anticipated that limited testing has been conducted and testing specific to the areas of project disturbance would be required prior to developing project specifications. However, at sites such as Diamond Shamrock, where more extensive testing has been conducted and remediation is already contemplated within the areas to be disturbed by the proposed project, NJDEP may require the project scope to incorporate or at a

minimum not conflict with existing or to-be-constructed remedial measures. As necessary additional subsurface testing (to guide health and safety procedures and measures necessary to protect both workers and the community, and to indicate whether special handling or disposal of soils or excavated materials is likely to be required) would be performed. Subsurface sampling within the right-of-way has not yet been performed. Once proposed areas of disturbance are known, subsurface investigations would be performed.

CONSTRUCTION HEALTH AND SAFETY PLAN (CHASP)

Prior to commencing site disturbance, a Construction Health and Safety Plan (CHASP) would be prepared to address both the known contamination issues (based on the then existing information) and contingency items (e.g., finding unexpected chromate contamination or petroleum storage tanks). The CHASP would describe in detail the health and safety procedures to minimize exposure of contaminated materials to workers and the public. The hazards would be evaluated by determining the known or suspected subsurface contaminants of concern and their chemical and physical characteristics, and health hazards would be considered within the potential exposure associated with the work to be performed. The CHASP would be developed in accordance with OSHA regulations and guidelines. The CHASP is expected to include designation and training of appropriate personnel, monitoring for the presence of contamination (e.g., buried tanks, drums or other containers, sludges; or soil which shows evidence of potential contamination, such as discoloration, staining, or odors) and appropriate response plans. To prevent the potential off-site transport of dust, dust control measures would be implemented as necessary during all earth-disturbing operations.

WASTE MANAGEMENT

The project documents would address procedures for stockpiling, testing, loading, transporting (including truck routes), and properly disposing of all excavated material requiring off-site disposal. Excavated material would be characterized to classify the material (e.g., as contaminated waste, petroleum-contaminated wastes, chromate-contaminated soils, historic fill containing construction and demolition debris, or uncontaminated native soils). The extent and parameters of this testing are dependent on the requirements of the waste disposal facilities, each of which may have different requirements for representative waste sampling and laboratory analysis prior to accepting material for disposal.

Wastes containing contaminated materials require special handling, storage, transportation, and disposal methods to prevent releases that could impact human health or the environment. Depending on the nature of the material, federal, state, and local regulations require the use of special containers or stockpiling practices for on-site storage of the material to prevent the release of contaminated materials to the environment. The federal, state, and local departments of transportation have requirements for transportation of wastes containing contaminated materials. Facilities that receive contaminated materials require federal, state, and local permits to accept the waste, and generally require that specific representative waste sampling and laboratory analysis protocols be conducted prior to accepting material for disposal.

GROUNDWATER

Where dewatering is required, it is possible that the water would require treatment prior to its discharge to surface water or existing sewers. Prior to any such discharge, the water would be tested and discharge, whether to surface water or sewer, would only be conducted in accordance

with applicable requirements including NPDES for discharge to surface water and local and state requirements for sewer discharge. *